

Maryland Wind Update

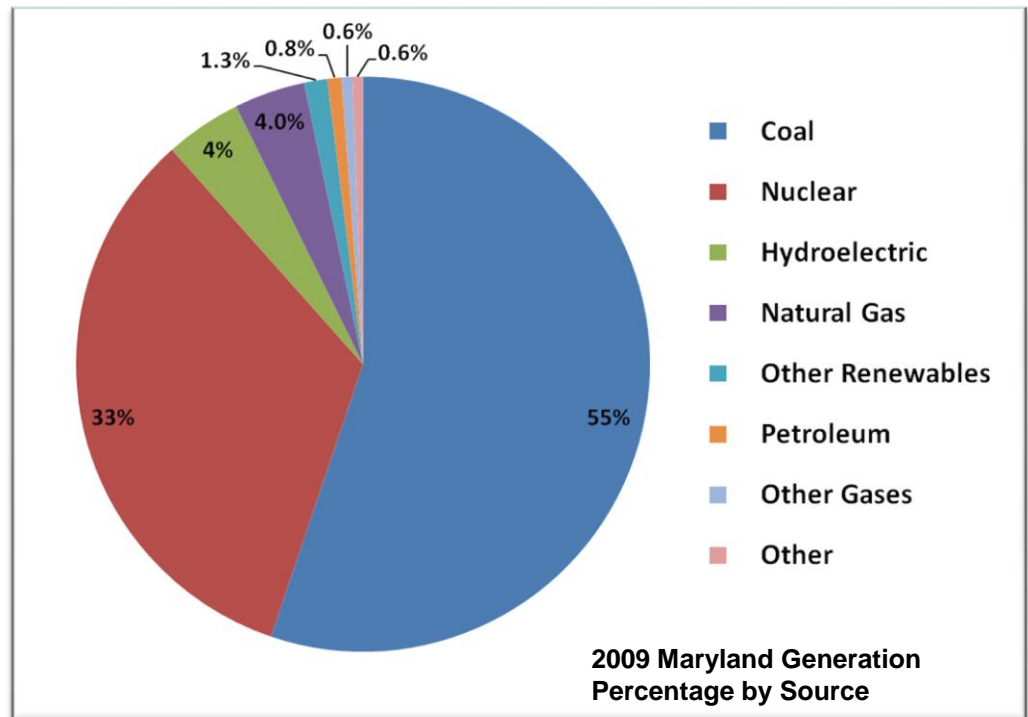
September 20, 2012

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Maryland Fuel Mix

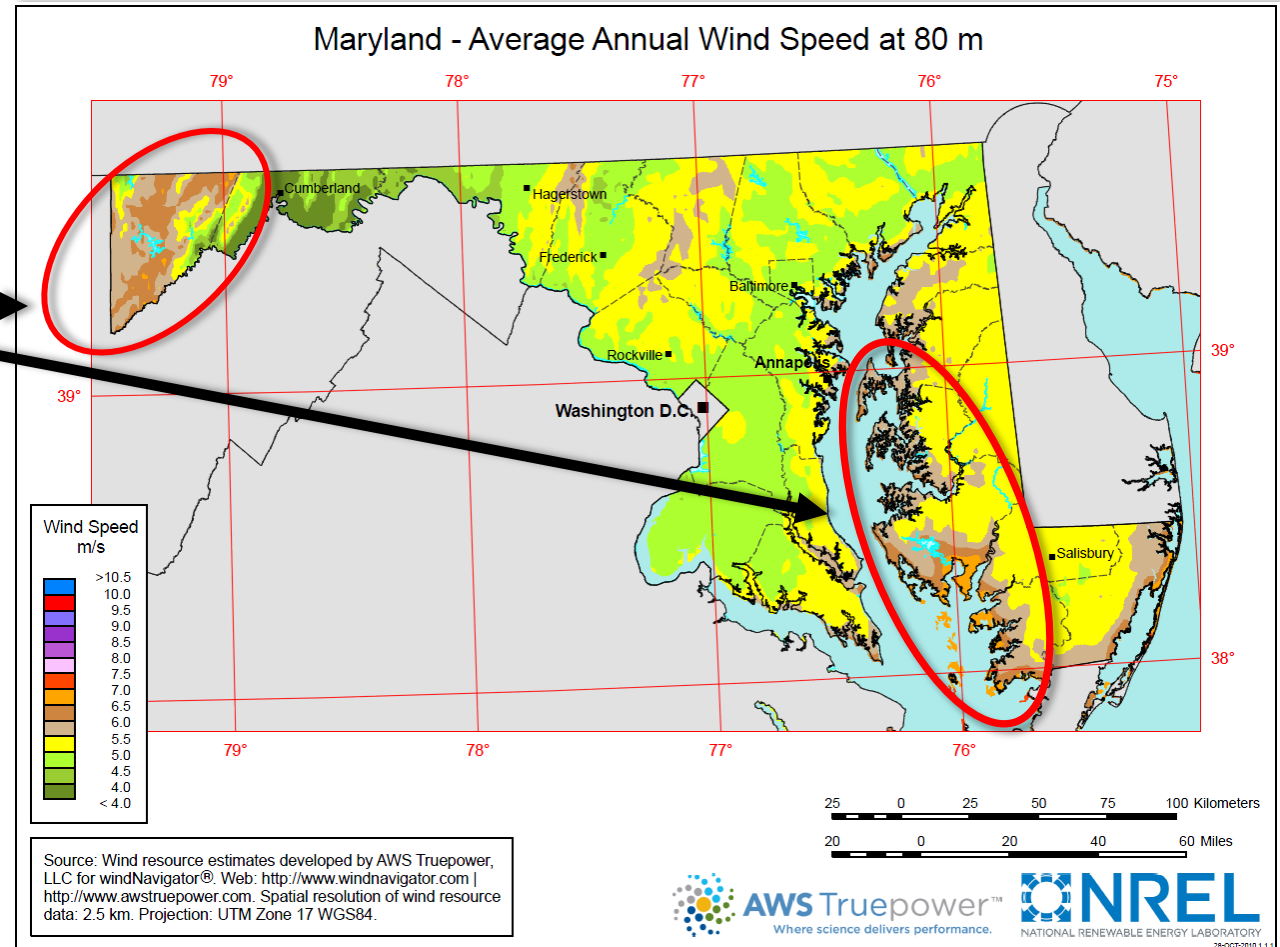
- Maryland still relies heavily on an aging fleet of fossil fuel plants for electricity generation.
- The Maryland Renewable Portfolio Standard requires that Maryland get 20% of its energy from renewable sources by the year 2022.
- Wind power offers one of the most affordable, scalable and deployable renewable energy sources available in the region.



EIA, *Maryland Electricity Profile 2009*, Table 5, available at:
http://www.eia.doe.gov/cneaf/electricity/st_profiles/maryland.html

Utility Scale Land Based Wind

- Wind maps of Maryland show strong resources in Western Maryland and the Eastern Shore.
- Other areas in Maryland have started to see significant interest in community wind projects and agricultural wind development.



Utility Scale Installations in Maryland

- In late 2010, Constellation Energy completed the first utility scale wind project in Maryland – the 70 megawatt *Criterion* wind park on Backbone Ridge in Garrett County.
- In August 2011, Gestamp Renewables completed the 50 megawatt *Roth Rock* wind farm just a few miles south.



Photo courtesy Constellation Energy



Photo courtesy Gestamp Wind

Western Maryland Wind Energy

- These combined projects represent an installed capacity of 120 megawatts from 48 turbines – enough to power over 35,000 homes.
- Additional projects are planned in this region, but limited Appalachian ridgeline makes proper siting in this area more challenging.

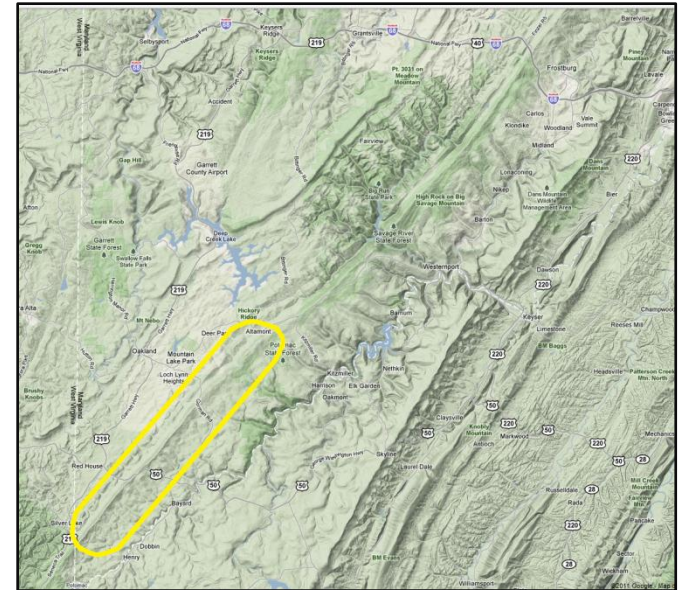
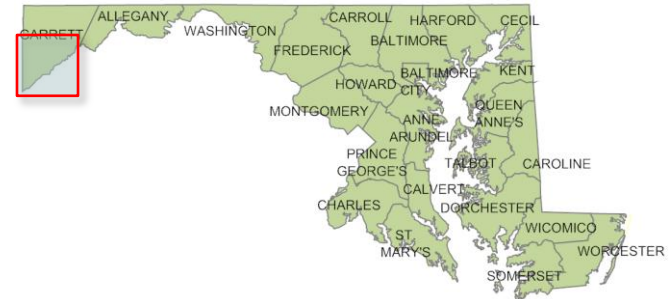


Image courtesy Google

Early Interest in the Eastern Shore

- Since 2010, utility scale projects on the Lower Eastern Shore of Maryland have started to see significant developer interest.
- This area is flat agricultural land and winds blow in from the Chesapeake Bay to the Atlantic.
- 2 projects in the area have filed for transmission interconnection approval from the Regional Transmission Organization.

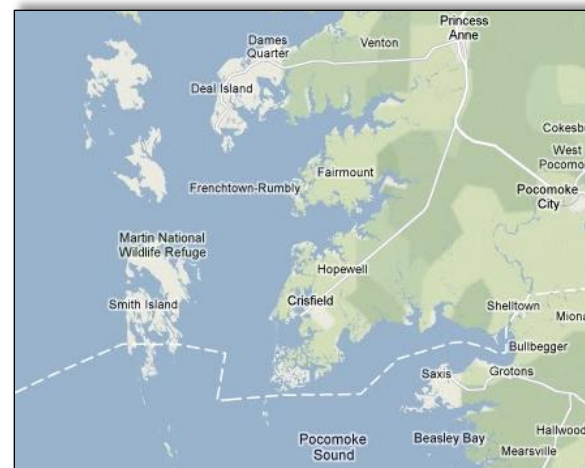
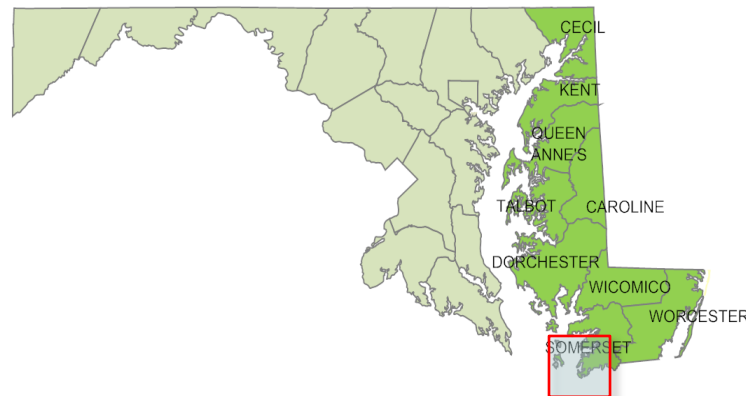


Image courtesy Google

Tall Tower Study

- MEA is partnering with Princeton Energy Resources International (PERI), Wor-Wic Community College and University of Maryland Eastern Shore under a DOE grant to obtain better multi-level high altitude wind data by installing anemometers on an existing radio tower.
- This data will provide important public information on local wind speed and shear at hub height for utility scale turbines, supporting development of regional community wind projects.

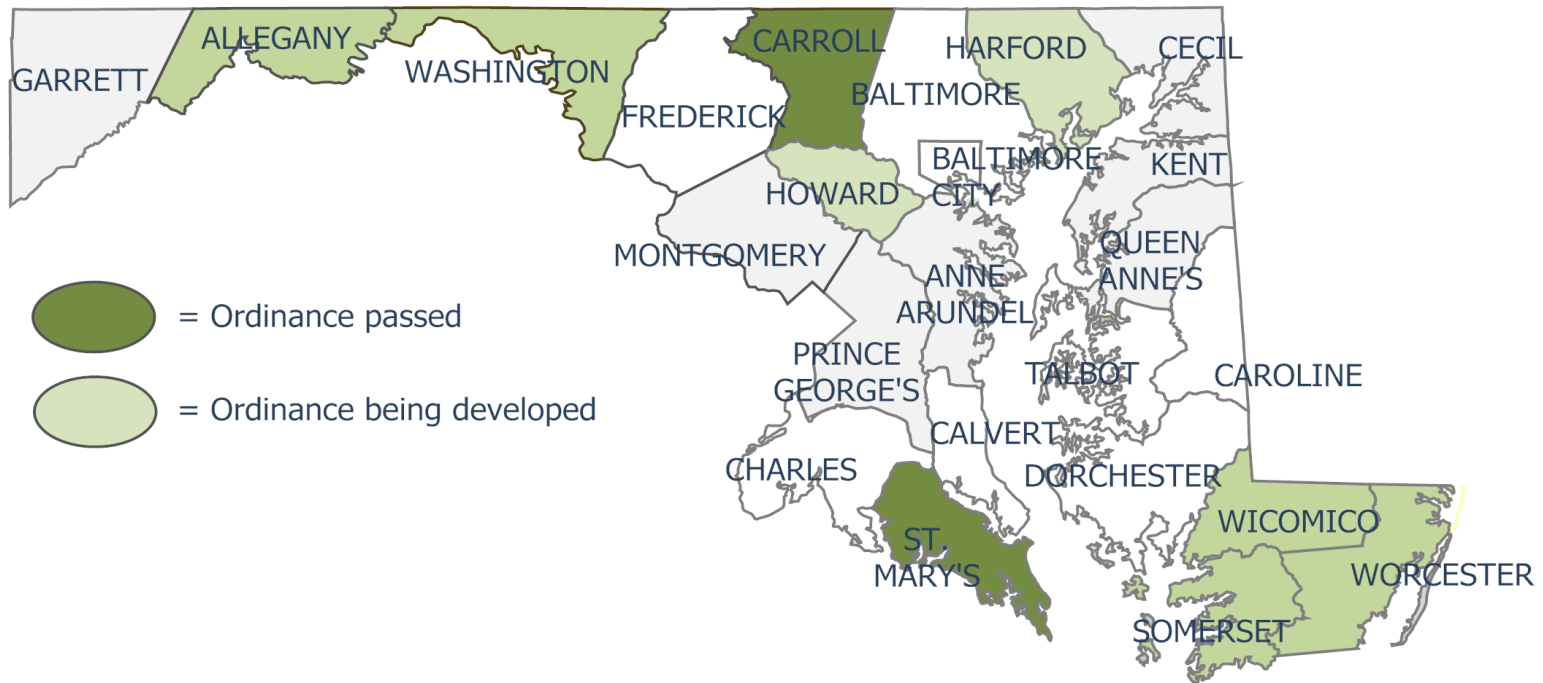


WOR-WIC
COMMUNITY COLLEGE



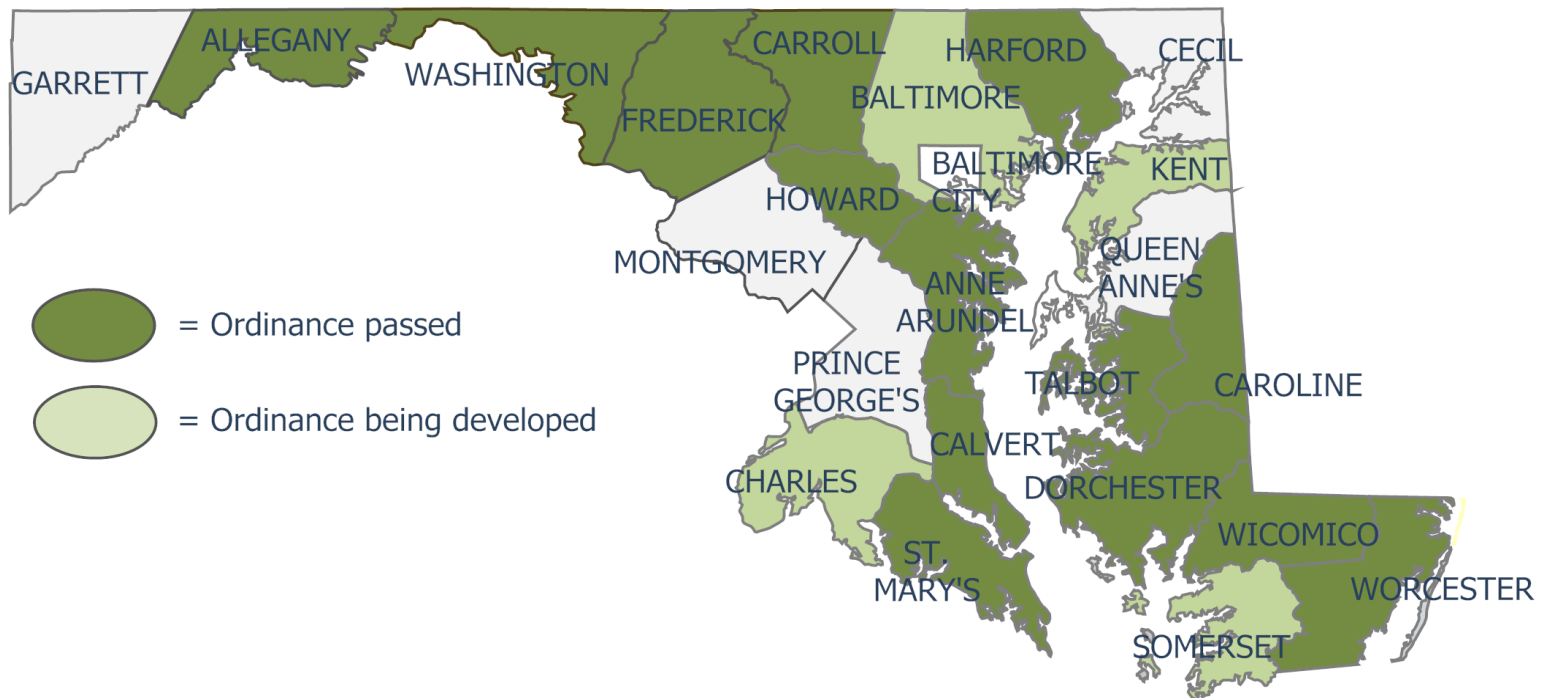
Ordinances

- At the beginning of 2009, only two Maryland counties had developed wind ordinances.



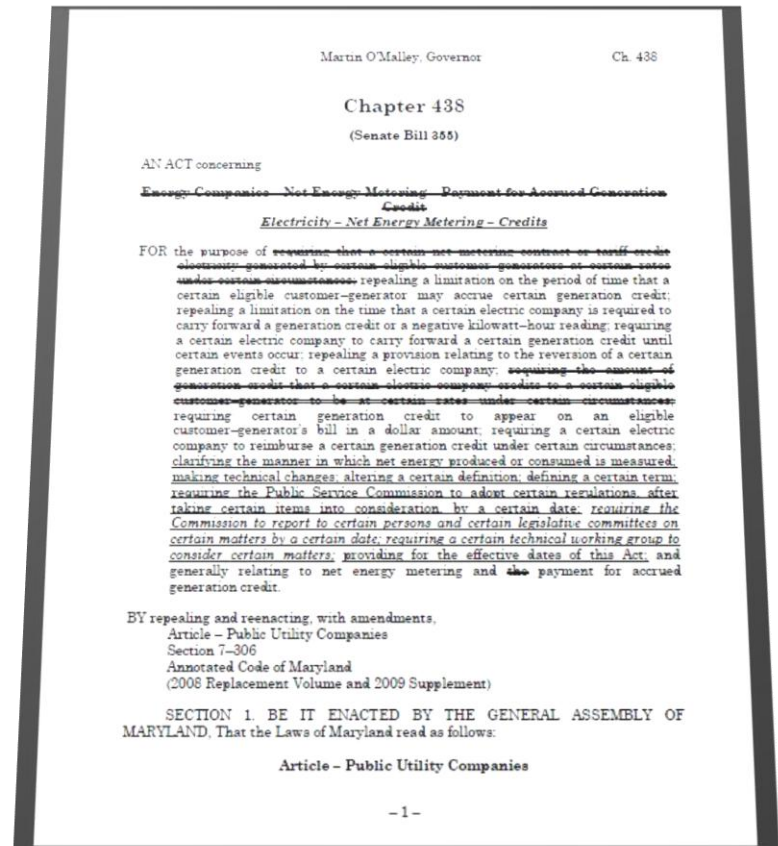
Ordinances

- Within 2 years, most of the Counties in high-wind areas of the state had passed ordinances allowing wind generation.



Net Metering

- Legislation in the 2011 General Assembly expanded Maryland's Net Metering policy to include:
 - Virtual aggregation for municipalities, farms and non-profits
 - One-time eligibility determination that will allow installation of systems projected to output up to 200% of historic load
 - Value for net excess generation beyond 1 year at retail energy (not distribution) rates



Community Wind

- In May, 2010 the City of Crisfield offered a Request for Proposals for wind energy projects on the site of the Crisfield Waste Water Treatment Plant.
- The city is reviewing proposals to develop a project that will reduce power costs to the facility.



Appendix D – Representative look of Renewable Energy Project

Community Wind

- Chesapeake College recently installed a 50 kilowatt Endurance wind turbine to power school facilities.
- MEA is pleased to have provided a \$75,000 *Windswept* grant to help make this model community wind project a reality.

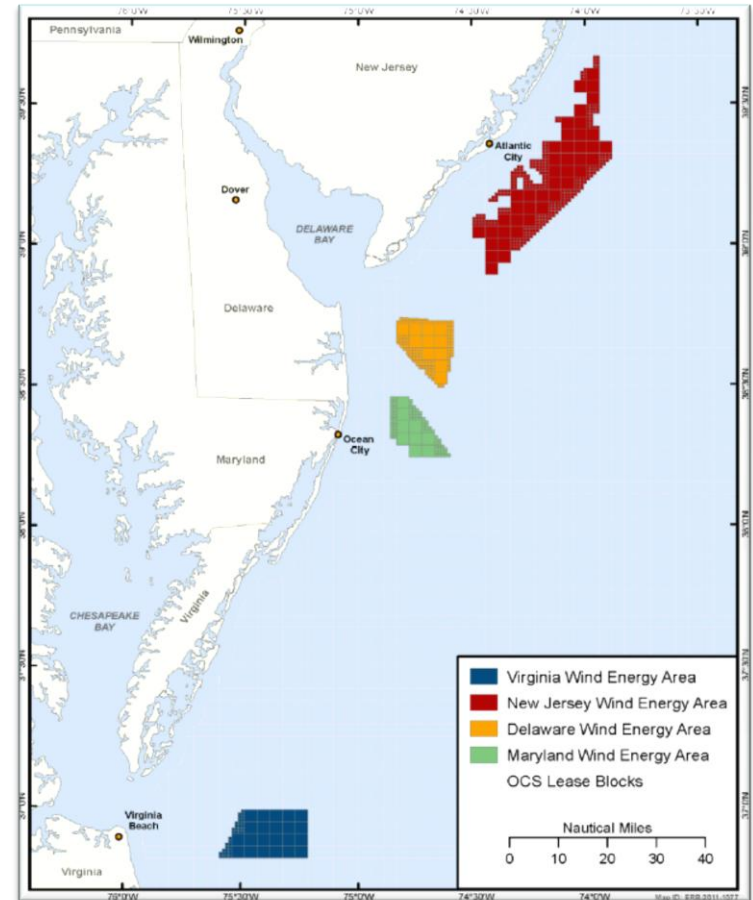


Photo Erin Fluharty



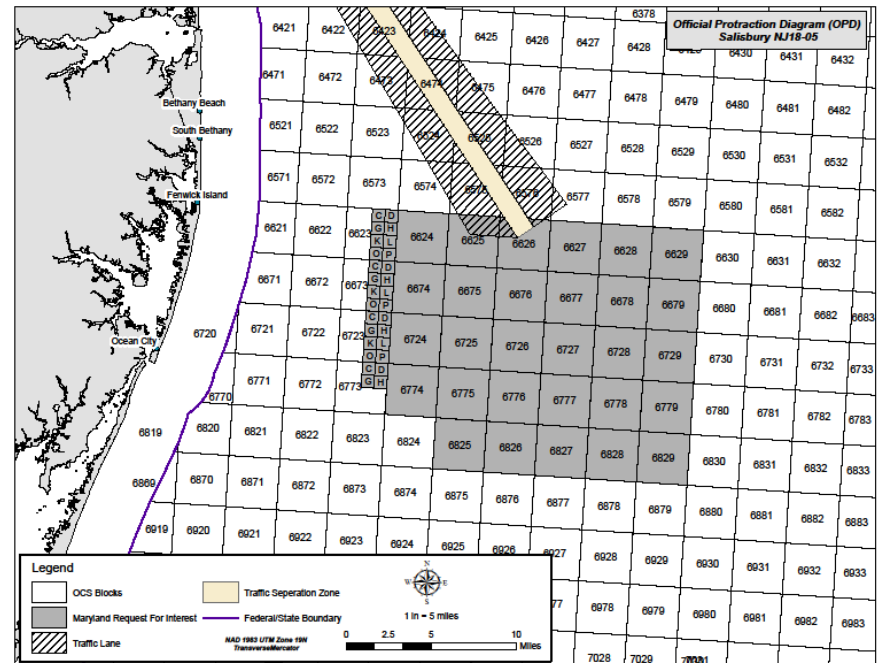
Offshore Wind Permitting

- Since 2009, the Maryland Energy Administration has been working with the U.S. Dept. of Interior to plan for deployment of offshore wind energy
- Upon request by Gov. O'Malley, the Dept. of Interior worked with Maryland to form a State/Federal Task Force
- This Task Force met several times and State and federal agencies worked to gather input from stakeholders including fisheries, shipping interests, environmental groups, Coast Guard and coastal communities.



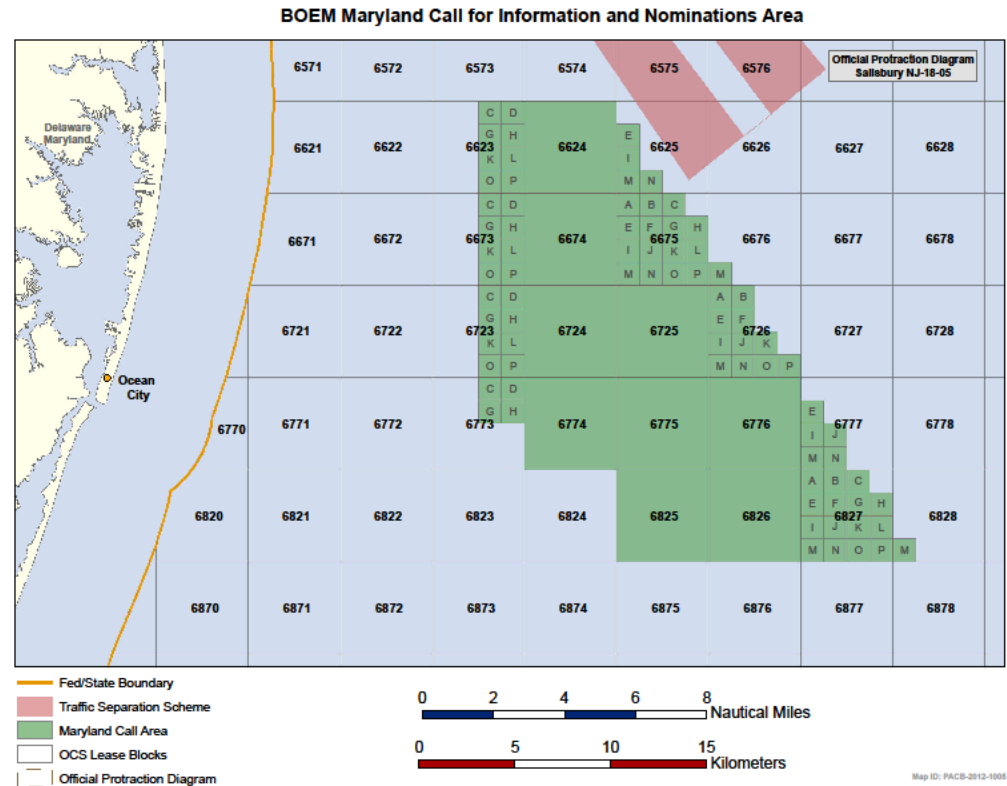
Leasing Review

- The Task Force accepted MEA's recommendation and identified a preliminary area of interest. BOEM issued a Request for Information (RFI) for the area in November, 2010.
- 8 Developers expressed interest, including several well-capitalized international renewables firms.



Leasing Review

- Working with stakeholders to resolve concerns about shipping, MEA recommended a refinement of the Wind Energy Area.
- The Task Force accepted these recommendations and BOEM issued a new “Call for Information and Nominations” in February.



Leasing Review

- Proposed Sale Notice – Anticipated November, 2012.
- Final Sale Notice – Anticipated January, 2013
- Final Lease Auction – Anticipated Q1, 2013



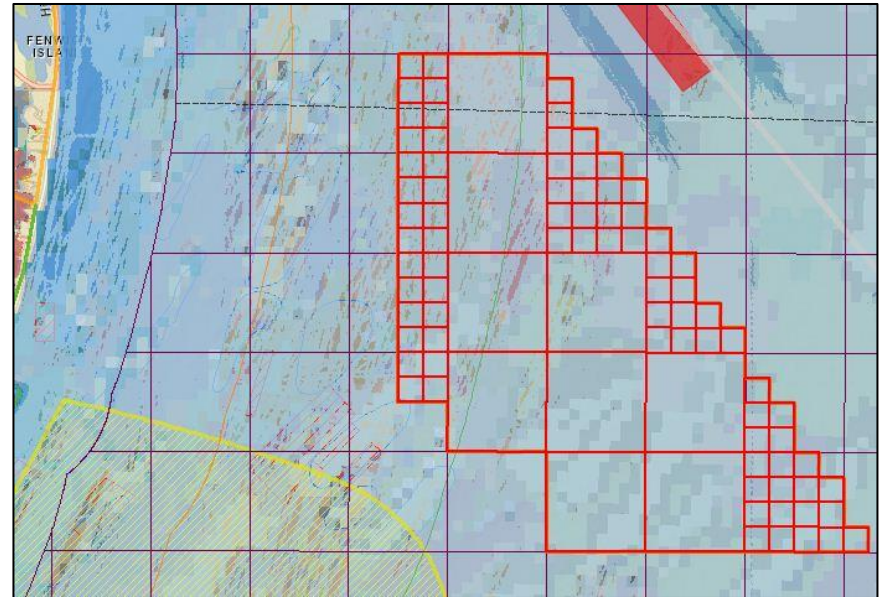
Offshore Wind Development Fund

- In settlement of the merger between Exelon Corporation and Constellation Energy Group, Exelon made available \$30 million for the advancement of offshore wind energy off the coast of Maryland.
- MEA plans to use much of this fund to develop meteorological, oceanographic and ecological resource data.



Offshore Wind Development Fund

- Environmental Surveys
 - Benthic, Pelagic, Ornithological, Sea Mammal, Bat
- Geophysical Survey
- Geotechnical Assistance
- Ultimately, this data will be necessary to compile a project proposal Constructions and Operations Plan, which must meet BOEM standards for project approval.



Offshore Wind Development Fund

- Geophysical Survey RFP
- Geophysical Remote Sensing:
 - Side Scan Sonar
 - Multi-Beam Bathymetry
 - Magnetometry
 - Seismic Sub-surface Imaging
- Potential platform for additional data gathering
 - Wind speed
 - Marine mammal observation

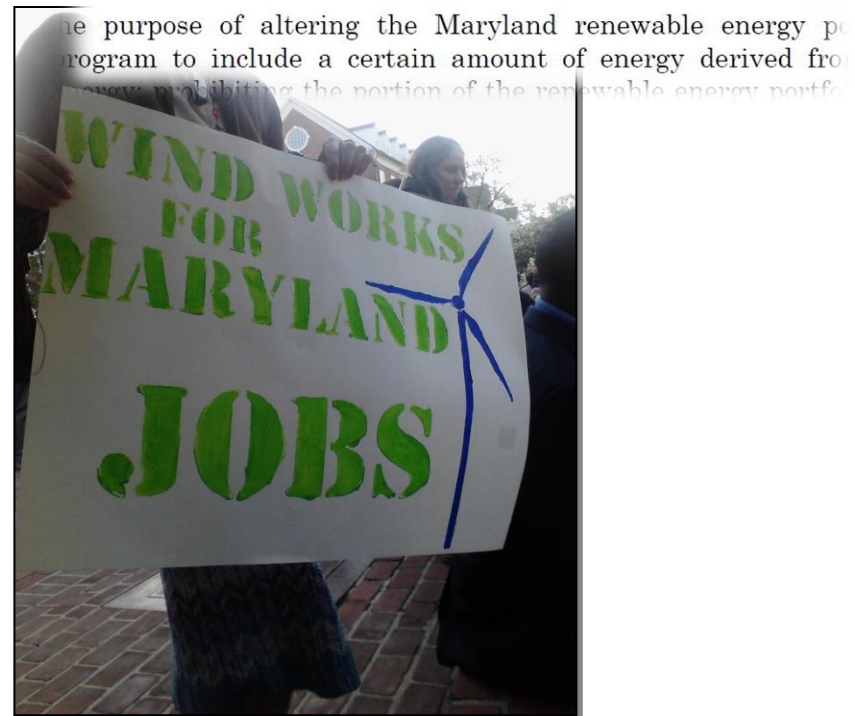


Legislative Efforts

- For the past two years, Gov. O'Malley has worked to pass legislation creating State incentives for offshore wind projects.
- Although the Maryland Offshore Wind Energy Act of 2012 passed 88-47 out of the Maryland House of Delegates, it got held up in the Senate Finance Committee.
- The Governor has indicated that he will support the legislation in the 2013 General Assembly session.
- While the 2011 bill would have required utilities to enter into long-term contracts for power from one or more wind farms off our shores, the 2012 bill developed an OREC program, similar to New Jersey's Offshore Wind Economic Development Act of 2010.
- This structure had support in the legislature and the bill is unlikely to need major re-drafting in advance of the next session.

concerning

Maryland Offshore Wind Energy Act of 2012



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